



# Poison HOTLINE

Partnership between Iowa Health System and  
University of Iowa Hospitals and Clinics

April 2011



*Did you know .....*

There are very specific indications for the use of potassium iodide (KI) during a radiation release from a nuclear power plant. KI is not a "radiation cure all" and is indicated **ONLY** to protect the thyroid gland from radioactive iodine, one of several radioactive isotopes released during a NPP accident.

KI is indicated for people who are projected to receive a dose of radioactive iodine that could lead to problems with the thyroid: either cancer in children or hypothyroidism in adults.

Taking KI when not indicated can lead to adverse effects, including hyperthyroidism or an allergic reaction.

## Radiation Concerns

There have been many questions about the health hazards of radiation since the nuclear power plant (NPP) accidents in Fukushima, Japan. Here is a primer addressing some of the most common concerns.

### **We are Exposed to Radiation Every Day**

On average, the typical American receives about 311 mrem of background radiation every year. That is equal to about 52 two-view (PA and lateral) chest x-rays. This background radiation comes from sources such as cosmic radiation, radon, and the earth itself.

### **Environmental Monitoring for Radiation in the U.S.**

The EPA has had a system in place for many years called RadNet which monitors the air, rain, drinking water and milk for radiation. There are 124 fixed-location air monitoring stations and another 40 deployable air monitoring stations, 9 of which have been deployed to the western U.S. since the Fukushima accidents. RadNet air monitors have shown that there is a natural fluctuation in the background levels of radiation. Additionally the EPA monitors drinking water at 74 sites, precipitation at 40 sites and milk at 36 sites.

### **Radiation from the Fukushima NPP's**

Those with the greatest risk from the radiation being released from the NPPs are those who live or work near the NPPs. It was expected that small amounts of radiation from the Fukushima NPP's would reach the U.S. Radiation reached the U.S. after the Chernobyl NPP incident in 1986 and the above-ground nuclear weapons testing in the Pacific in the 1950's. The amount of radiation from the Japanese NPPs detected by the RadNet monitors across the U.S. is miniscule compared to the amount of background radiation we receive every day. The readings from the RadNet air monitors in Iowa have been consistent with the natural background fluctuations in radiation seen over time. The EPA reports that the amount of radiation detected by the RadNet system is many times below a level at which any action would need to be taken.

For questions or concerns about radiation, call the ISPCC at 1-800-222-1222.

*Edward Bottei, MD, FCCP, FACMT  
Medical Director, ISPCC*

**POISON**  
**Help**  
1-800-222-1222

Post and share this edition of **Poison Hotline** with your colleagues. Send comments or questions to Poison Hotline, 712-234-8775 (fax) or [noblef@ihs.org](mailto:noblef@ihs.org). To subscribe or unsubscribe from this distribution list, contact the Iowa Poison Center education office at 712-279-3717. Read past issues of **Poison Hotline** at [www.iowapoison.org](http://www.iowapoison.org).